

CRY1008	* 20 * 40 * 60 * 80	* 20 * 40 * 60 * 80	* 20 * 40 * 60 * 80
CRY1a1	-----VKENSPYQNEYEILLESSMN-----	-----TNPYRPFANDRINTMSUDCQGSDUETIES-----	-----TNPYRPFANDRINTMSUDCQGSDUETIES-----
CRY3Bb	-----MDNNPINECIPYNCNSNPEVYLG-----	-----MDNNPINECIPYNCNSNPEVYLG-----	-----G-ERIETETYPI-----
CRY4a1	-----MDNNPINECIPYNCNSNPEVYLG-----	-----MDNNPINECIPYNCNSNPEVYLG-----	-----G-ERIETETYPI-----
CRY4a2	-----MKLRNQDKHQSSEHARVDELTIDS-----	-----LKEETDTELQNTHEDCURMSEYEN-----	-----VEPFVASTIQ-----
CRY4a6	-----MNVLNLSERTIDCAYNNVVAHDPPSFERSLDLTQIREWKRTHS-----	-----TEADSDSTTKDVIQ-----	-----L-----
CRY3Aa1	-----MIRKGGERKMPMPNRSSEDTIKITPENNEVPTMHVQYPLAFTPNFTSLEELAYKEFLRMTADN-----	-----TEADSDSTTKDVIQ-----	-----48-----
CRY3Bb	-----MNPMPNRSSEDTIKITPENSELOTMENQYPLADNPNTSLEELAYKEFLRMTDSS-----	-----TEVDNNTYKDAVG-----	-----58-----
CRY4a1	-----TNPYQNEYEYLNAISKKLNNSMNTYTRPTEMSPKLOSSNTYKDLNMCONQ-QY-----	-----GGEDETEFDGELS-----	-----36-----
CRY4a2	-----MNSCEYPLANDLOGSMKNTYKDLAMCENDO-QY-----	-----GVNAAINGS-SVS-----	-----36-----
CRY4a6	-----MNSCEYPLANDLOGSMKNTYKDLAMCENDO-QY-----	-----GVNAAINGS-SVS-----	-----61-----
CRY6a6	-----MIDSKTTPRSHLINTKLN5MKRYGKGDMTNGQ-----	-----FLISRQ-----	-----42-----
CRY7a1	-----MNLNLDGEDSNRTLN-----	-----PE-ALASGNTAIN-----	-----60-----
CRY8a1	-----MSPNQNEYEYLDAPESTSYSDSURYFPANEPTDALQNMKTYKDLNVCODNQYEMAGAFASETTIVGVS-----	-----FGNETTFSISSTIQ-----	-----70-----
CRY10a6	-----TNPYQNEYEYLNAPENGFSKSNNTYERYPLANKPNPLKNTMVKDLNVCODNQYEMAGAFASETTIVGVS-----	-----74-----	-----
CRY16a1	-----RHYGYRMEYDLMASENDSSMSNTYPRYPLANTODIMONTYKDLNVCYGHEN-----	-----PR--EASTRAGLG-----	-----69-----
CRY19a6	-----MNSYQNEYEYLDAKENTCHNSCYRPLANDPQYLRNTHYKDLNMCESALYAS-----	-----S-----	-----62-----
CRY24a6	-----TNPYQNEYEYLESSMN-----	-----G-----	-----62-----
CRY25a1	-----TNPYQKSECELLA1PLNN-----	-----ISPSPAAA-----	-----60-----
CRY39a1	-----TNPYQNEYEYLNDSEKS-MNSNPLYRPLANDSLASMQNTYKDLNCDGTP-----	-----SIFTLG-----	-----60-----
CRY40a1	-----TNPYQNEYEYLESSMN-----	-----SRGAVS-----	-----64-----
		-----AT-----	-----54-----

FIG. 1B

* 160	*	200	*	220	*	240
CRY1008 : EYVLSYLGATLKDGPL1-QKTTNSDIGOLVYFKLSEEDFNEIGGSLSRN---		NAVLLPFTQAQANHLLRLDAV		NAVLLPFTQAQANHLLRLDAV		NAVLLPFTQAQANHLLRLDAV
CRY1Aa : QIYAESPREWADP-----		TMPLAREMIRQFDNMSALITAIPPLAVQ-----		NYQVPLLSVYQAAQANHLSVLRDVS		NYQVPLLSVYQAAQANHLSVLRDVS
CRY1AC : QIYASSTREWADP-----		TMPLAREMIRQFDNMSALITAIPPLAVQ-----		NYQVPLLSVYQAAQANHLSVLRDVS		NYQVPLLSVYQAAQANHLSVLRDVS
CRY1Ia : AYEDSLESTVEN-----		ROMNTRARSYKSYQIALEIMFWQKLPSFAVS-----		GEVPLPFTPYAQAAQANHLLRLDAS		GEVPLPFTPYAQAAQANHLLRLDAS
CRY2Aa : HEFNQUDDNFLNP-----		TQNPVPLSITSSYNTMQUEFLAHLPOFOLOG-----		YULLLPFTQAQANHLSFIRDVY		YULLLPFTQAQANHLSFIRDVY
CRY3Aa1 : EDYVSAALSSTWQKPV-----		SSRPHSGQIRELFSQAEASHTRNSMPSFAS-----		CYEVLFLYTQAQANHFLPLKDAQ		CYEVLFLYTQAQANHFLPLKDAQ
CRY3Bb : EDYVNAALNSSTKTP-----		SLRSRERSDQIRELFSQAEASHTRNSMPSFAS-----		KFEVLFPLYTQAQANHLLRLDAQ		KFEVLFPLYTQAQANHLLRLDAQ
CRY4Aa : STYHNEHLKTIWQPNP-----		PQNTDQVTRQIQLWHYHFWQVPELYWNSCNPNSCDYNNLVLVSSYQAAQANHLYTLNQAV		225		225
CRY4Bb : DQYTTFKNTUREPNN-----		NQ-----		SYRATVQTQMLTSQMLRETAVYFSNUYGELLPLPYAQAAQANHLLRLDGL		SYRATVQTQMLTSQMLRETAVYFSNUYGELLPLPYAQAAQANHLLRLDGL
CRY6Aa : DPSIKKDGYFFKLQD-----		ELDNTWQNSDDALAKAIEDFKARCG-----		-LILKEAKYEEAAKNLYTSLDQF		-LILKEAKYEEAAKNLYTSLDQF
CRY7Aa : DRYQKRALADUJGK-----		QDPEAIISSVATEFRIDSLEFEMPSFAVT-----		GTEVPLPLTYAQAQANHLLRLDST		GTEVPLPLTYAQAQANHLLRLDST
CRY6Aa : DRYQQGSLDULEN-----		RUDARTRAVVSNQFLDANFWSLPSFAVS-----		CHEVLLLAYAQAAQANHLLRLDAS		CHEVLLLAYAQAAQANHLLRLDAS
CRY10Aa : DRYQEFDKQEPAR-----		-THANAKAVHDLFTTLEPLIDDLDMRDN-----		ASTRILTPLYAAQATJHMLKHA		ASTRILTPLYAAQATJHMLKHA
CRY16Aa : DDMNMLKQKEDDP-----		RSTGNLSTLVFTKTAQDFNGAIRTQYNGS-----		PGVLLLPFTYQAAQANHLLRLDAQ		PGVLLLPFTYQAAQANHLLRLDAQ
CRY19Ba : MIVYRALAAATWQNK-----		MMFASGEILTRSYNDIHLFTDQJOSDFSLG-----		CYETVLLPYAQAQANHLLRLDVA		CYETVLLPYAQAQANHLLRLDVA
CRY24Aa : RDIYGALEATWQNK-----		SMINYQINVAEAKFTVEREFFTKLKGTYRTS-----		SSQUTLLPFTTOQAQANHLSMRLDAV		SSQUTLLPFTTOQAQANHLSMRLDAV
CRY25Aa : TTYKLKULQDQDTTRIPANQGDSQLREARRSLEEIRDFFKALAGEFAAG-----		SUIVLLPFTPYAQAAQANHLLRLDAM		SUIVLLPFTPYAQAAQANHLLRLDAM		SUIVLLPFTPYAQAAQANHLLRLDAM
CRY39Aa1 : CLFRDADTSWQKQ-----		-NDPIAKORVQGFTEDVHFTVQDMAISFTSAT-----		NEVVLPLPYAQAQANHLLRLREGV		NEVVLPLPYAQAQANHLLRLREGV
CRY40Aa1 : EYPLPYLEAULKDGPL1-QKTTNSDIGOLVYFKTELSEDFNEIGGSLSARN-----		NAQILLLPYFCAS5KCUQLLRLDAV		NAQILLLPYFCAS5KCUQLLRLDAV		NAQILLLPYFCAS5KCUQLLRLDAV

* 260 :	QYKAQUPPFISAEVNRSELLISNSGGCDFTGDDYERLKCKTAEVNYCLUYQVGLNQIKQGETGADT	* 300 :	320 :
CRY1008 :	-----TINERYNDLTRLIGNTYDARWYNTGLERTYGPDSRD	CRY1008 :	--WSEKFMKFR : 284
CRY1a8 :	-----TINERYNDLTRLIGNTYDARWYNTGLERTYGPDSRD	CRY1a8 :	--WRYWNOFR : 234
CRY1aC :	-----TINERYNDLTRLIGNTYDARWYNTGLERTYGPDSRD	CRY1aC :	--WRYWNOFR : 234
CRY1i8 :	-----E1GKEQELSS-----	CRY1i8 :	--WRYWNOFR : 262
CRY1s8 :	-----LRTFDLRLYDNYLTDYQVGLTQAFGLNTLDEMLFR-TYFLNVEY	CRY1s8 :	--WRYWNOFR : 255
CRY2a6 :	-----LNADEWLSAAT-----	CRY2a6 :	--DIAEFYKROLKLQTQYTDHCKWYQGLDKLQRSSYES-----
CRY3Aa1 :	-----VGEFEWYSE-----	CRY3Aa1 :	--WVNFMRFR : 278
CRY3Bb :	-----KFEAVLKNRQDYL-----	CRY3Bb :	--DVAEFYHRLKLQTQYTDHCKWYQGLDKLQRSSYES-----
CRY4a8 :	-----EPLTAIDYPVLTKAIDEDINYCYTYKGLNLKTPDSNLDENINTNTNTYTKT	CRY4a8 :	--WVKFMFRFR : 271
CRY4B8 :	-----LNAEQEGLAR-----	CRY4B8 :	--Q-WLTNDYKR : 297
CRY5a8 :	-----LHGQDKRKLFTIN-----	CRY5a8 :	--IQRQKEVDTALNQAHGESSPAHLLERLKVNLKI-----TLR- : 251
CRY7a8 :	-----LYGDKGKFTQN-----	CRY7a8 :	--WENNTYRKRISSESDHCKTWTWNSGLSRINGSTEQ-----WVNYMRFR : 261
CRY8a8 :	-----IFCEEUGFTP-----	CRY8a8 :	--EISRYTMRQVOLTALESYDCKWYKIGLDKLKGTSKS-----WLNHYOFR : 272
CRY10a8 :	-----TYYTNTLQNGQINPSTW-----	CRY10a8 :	--SSNTYQGYLKRKIIQETYDYC1QTTAGLTMRTNTMAT-----WNNNTNTYKL : 283
CRY16a8 :	-----IYGDKWSARANA-----	CRY16a8 :	--RDNYQIQOLEKTRKTEYCLNUYQGLNDRTAQ-----WVAFMFRYR : 275
CRY19B8 :	-----IYG-KELGYCPT-----	CRY19B8 :	--VEFYNQKTYTKEVSYCWNVTRGLESKQIG-----WSDFMYFR : 263
CRY24a8 :	-----NQE GONLQ SHIN-----	CRY24a8 :	--YSKE LD DAI DLT DNYC E VY TKG LNA R G S T A I D -----WLFMSFR : 262
CRY25a8 :	-----UFRTD1GLTRPVG-----	CRY25a8 :	--VPITSAEDPTESEFLIRKQYTDHCL5YSDGGLAKRSRGSDG-----ETWUEFMKFR : 278
CRY39a81 :	-----IYGRSUCLAP-----	CRY39a81 :	--ADYFHDLQKLYTAIYANHCYTVYQGLAQQKELFARSPPN-----WDRFMAYR : 271
CRY40a81 :	-----QYEEQUPPFISAEVNRSELLISNSGGCDFTGDDYERLKCKTAEVNYQVGLNQIKQAGTGA	CRY40a81 :	--WAKENKFR : 281

*	340	*	360	*	380	*	400
CRY1008	: EMTLVLDIILAFPTDFEKYPKP-----	-TIVELTREITYTDAYGTSGGTYSLRNMNFTNGEAN-----	-GTRGPGL	: 352			
CRY1Aa	: EMTLVLDIILAFPTDFSRYPKP-----	-TVSQLTREITYMPVLEDFDSFGMAORIEQN-----	-IRQPHL	: 296			
CRY1Ac	: EMTLVLDIILAFPTDFDSRYPKP-----	-TVSQLTREITYMPVLEDFDSFGSAQGERS-----	-IRSPHL	: 296			
CRY1B	: DMTLMLVDIILAFPTDSTOMYPIK-----	-TTAQLTREVTYTDAYGTHPHPSSTTTYYNNMAPSFSALEAVRNPHL		: 335			
CRY2A	: VSIUSLFRYQSMYSSGAAVLYASG-----	-SQQPQUTSFTLQWNPFLYSLFUVNSAHLISL5GTRL5-----	-ITTPNL	: 323			
CRY3Aa1	: EMTLVLDIILAFPTDVRLYPK-----	-VKTELTRDVLTDPIVGTMNLREGYGTTSNEN-----	-YTRKPHL	: 341			
CRY3Bb	: EMTLVLDIILAFPTDFIRLYPKG-----	-VKTELTRDIFTDPFISLNTLQEGTPFL5IEN-----	-SIRKPHL	: 334			
CRY4Aa	: EMTIAVLDIILVALFPTDVGKYPIC-----	-VOSELTREIYQVLNFEESPKYKTDQUTQEDSLT-----	-R-RPHL	: 359			
CRY4Bb	: EMTIQVLDIILAFASIDPRYPAKDNKLSKTFIREYITVAVLSE-----	-SK-SIAALEAALT-----	-R-DVHL	: 317			
CRY5Aa	: -T-TRAFODIERRVEYFLIGPLIG-----	-FVVEILLENTAQHINKQIDEIKQQLDQAQHLD-----	-RDVKL	: 300			
CRY7Aa	: EMLMADLIVAVFPEDPRRYSEME-----	-ISTOLTREVTYDPVSLSTSNPDPGSPSFQEMEN-----	-TAIRTPHL	: 325			
CRY8Aa	: EMTLIVLDIILAFPTDTHMYPK-----	-TTAQLTQDWTDPFLATIVTSTGFCNPUSTHSILFVEWNNYTRPFL		: 345			
CRY10Aa	: EMTLVLDIILAFPTDPEKYPIC-----	-VSESLIREYVNNSDTR-----	-TTELENG-----				
CRY16Aa	: EMTLVLDIILAFPTDARLYP-----	-VKTELIREYVNNSDVINGEYGLMPYFSTEKAES-----	-LYTRAPHL	: 340			
CRY19Bb	: EMTLSVLDIILAFPTDGLYPSK-----	-DGKTHVKAELIRETYSVWINDHVGMLMPYFSEHAFS-----	-LYTRPFLA	: 333			
CRY24Aa	: DMTLMLVDIILAFPTMPVRYL5-----	-TKISLSRKYTDPVGRDSPSPFEDWTGTRTLAN-FNDLEREYTDSPSL		: 334			
CRY25Aa	: EMTLVLDIILAFPTDARLYKYPK-----	-TOTELSRVYTDPVGCENRKEDIFSRANDFVLEN-----	-RUTRPREP	: 345			
CRY39Aa1	: DMTIYLDIILAFPTDARLYTKP-----	-IKIELTREIYSDVLAQDVOGVQUDLAKNEAAF-----	-TRSPHL	: 334			
CRY40Aa1	: EMTLVLDIILAFPTDFKRYPLP-----	-TIVELTREITYTDPGYSSGTYSLVKYUTGAFTNLEA-----	-GTRGPGL	: 349			

CRY1008	*	420	*	440	*	460	*	480
CRY1Aa	:	VTULSKRIGIYMEYVER	----	YFAGUVGTRHYEDYTGN	----	-GIFQRMSGTTEIDLRNIDFQWADYVYKRTSLAII	:	419
CRY1Ac	:	MDILNSLITTYTDVHRG	----	FNTUSGHQHTASAPVGFSGD-EFAPPFENAGNAI-P-P	-VIVSLTEGIFTGIFTLSSPL	:	365	
CRY1Ia	:	MDILNSLITTYTDVHRG	----	YFTUSGHQHTASAPVGFSGD-EFAPPFENAGNAI-P	-PQQRTVAQLGQGVTRTSSLI	:	366	
CRY1Ia	:	LDFFLEQVTTYSILLS	-	RWSNTQYENNGEGKELLEFRTGCTLN-1STQGNTSINPV-TLPFTSDRWTYRESLAGNLF	:	410		
CRY2Aa	:	CGLPGSTTTHINSARWVSYGVSQGUGSLLGATNUENTNCSTYPLPLSTPFWRELSWDFQUTQEFOTL	:	403				
CRY3Aa1	:	PDYLHRUQFHTRFQP	--GYYENDSFNTUSGHQVYSTRPSIGNSD	-LITSPFYGKNSSE	--PVYQNEFNGKVKYRVARANTNL	:	416	
CRY3Bb	:	PDYLOQGEFHTRLQP	--GYFKEFDSNTUSGHQVYSTRPSIGNSR	-TITSPFYGKDRKSTE	--PVYQKLSFGDGRVYRTIANTDV	:	409	
CRY4Aa	:	FTULDLSLNFYERAKQT	--P	--MNFPTSHMNFHTDNLIS-QKSSVYFG-NHNTVD-KLKSICLATMITYIFLINVSI	:	429		
CRY4Ba	:	FTULRKRDFTUTTNYQ	--D	--LRLSANKLGFSTNSAM-QESEGYGSSGEGSM-LTHQQLNSNWKTSITDTS	:	368		
CRY6Aa	:	IGMLNSINTDIDNLYQGQAIAKVFQKLUQGATTAQIENUR-TTSLQEVQDSDDAEIQTELEDASDAAWVVAQEDR	:	379				
CRY7Aa	:	WDYLJELVYTFSKYRASFSHEIOPDLFTWSAHRVSEKSEQSN	--LYTGTGTYGKTSGYI-SGAGSFHGNDIYTRTLAAPS	:	402			
CRY8Aa	:	FDILSVEINTSRGGI-TLMNDAYINTUSGHFLKYRTETADSTV-TTANYGRITSEEN-SFALEDRDIFENSTVNTIAN	:	422				
CRY10Aa	:	FTWINGRFTYRINS	--	--RDILDPPDIFSFTGNCMA-FTHINDDRLIUGAVHGNITISQDTSRKFPTYRMKPI	:	409		
CRY16Aa	:	FTULKGERFTYRINS	--	--WTLGGGOMKYSTINS-3-IMESCFRGDTDYGTSSTINIPMSYVWLUENY	:	410		
CRY19Ba	:	FTULKGFRFTYRINS	--	--WTLGGFGRFTYRINS-3-IMESCFRGDTDYGTSSTINIPMSYVWLUENY	:	404		
CRY24Aa	:	WKLGEDEMTTYTAIDSYRPTSPDRIGWYMINAFTHTGRD	-WVMFROTQDFTAYEDPSTFISNLLYDDIYKLDRAA	:	413			
CRY25Aa	:	FTYLNESWQLVFLASTSVN	--SIN	--GEVLRGNIKMKMEGGTA-SRSEDGTYTGTGFSTMDUFGWGYGPRKHYAEITRS	:	419		
CRY39Aa1	:	VTRLRGTDFTYRKYA	--Y	--WYRLAIGHTNYFSTGNG--TIVSSSFMMQYDIDMKTSTINI PDYANITYKLWIKSY	:	404		
CRY40Aa1	:	VTULRSIGIYMEYVER	----	YFAGUVGTRHYEDYTGN	----	-GMFQRMSGTTSNDLRDTSFPNSDIFKIESKAM	:	416

* * * * *

CRY1008	W---LVEGETTARERPYRVEKADEFRRVGGPDLYDAGNCGLSRMTESTPLVLHEN	500	520	540	560
CRY11ae	YRILLG-SGPNNQELFVLDGEFSFASTITLPSTYHQRGTVDSLVTPDDNS				GYRGSPHRLSMAACVY
CRY12ac	YRPFN--IGLNNQQLSWLDGEFAYG--TS SMLPSAVYRKSGTVDSEIPQNN				--VPRAGFHLRSEVTMLSQ
CRY13	LTUPVNGPRVNDPFDYRKNWPLASDNFTPYGATG---TOLDSENELPPEATG				--VPRQGFHLRSEVSMFRS
CRY2aS	URCGAFASRGRVNDPFDYRKNWPLASDNFTPYGATG---TOLDSENELPPEATG				--QVNEYSHRLSHIGLIS
CRY3aL	ATVPS-AVSYETKVEFQYQDDEAQTQDTSKRN-VGAVS4D5DQLPPTD				--ARAVLYSVIRKNNY
CRY3Bb	AAUPNGRVLVLYTKVDFQYQDQKNEFSTUTD5KRN-VGAVS4D5DQLPPTD				--EPLEKTYSHQLYNYMCFIM
CRY4a	DNKYLLDYN11KMDFTLNGTRLLEKETUTD5KRN-VGAVS4D5DQLPPTD				--EPLEKAYSHQLYNAECFIM
CRY4Bb	P---S---NRTVTKDFKDGTLASVNTTPT---EGLRUTTFFGFTENTPNQ				--EPLEKAYSHQLYNTPKTSI
CRY5aS	FTLMAVTSNQLNPLINV15DNCSTTM3NQYSAPFTTNTSNOMI SHETTSPL				--PTVDDYTHL5VIRTDV
CRY7aS	WVPPY---TQVNGWEQFEGYKGVGHVYGRDNEYDLT-----YDSIDQLPFDGE				--MNFML5RNSMNLVFC
CRY9aR	WYQKATGVPGEFHMVRGTSSTIAVLYSKHTALQG--CIVQYESSDEIPDRT				--PIHEKTYTHRLCHATAIYK
CRY10a	DRVE1VHRE7D1VYMIEFFNSSEVRYSSWSTIENYRDTSYLPKQTEME				--VVAEETYSHRLSHITSHSF
CRY11a	EYIYPOGDPMVITKOMFSVTDNSSEKLLYGAHRTKPPWVRTDFDFLTKECTEL				--EYGHLYVIRTDNY
CRY19a	EWIYPOGDPMVITKOMFSVTDNSSEKLLYGAHRTKPPWVRTDFDFLTKECTEL				--AKYDYNHLSYMLINGE
CRY24a	WSTIUGAMDITFGVSSRFEDTRGRNOLYQSKKPKYPSLPIITPGEESSEMAN				--TTYDYNHLSYMLINGE
CRY25a	QALPGIANNSIVIYVGDISFRALGPGGCGQDHTSLPGGMDTCKVQMLPDIYRNS				--DYSHLCDWKLQF
CRY39aL	TNISPTIDPVTSQMSOFSLTNQOLVYIYTSAKYP-----VRETFELIPTDEP				--DHTLSDMNTINTQSTOL
CRY40aL	W---LVEGEINRPEPRVERALFESTAFTYLYDAENGSL5SMTTSKLPGKNEP				--SYRDYSHRLSMAACVGA

		*	580	*	600	*	620	*	640
exm008	GNS	--RINYGUTHTSILKPRENTIEANQTIPAKSYLQNYLANTAIVY-TKEHTHTGDLIRFLRKSEYNAVY							560
cry1aE	AAG	--AVYTLRAPTSWQHRSFASWMLTPSSQQTIPLTKSTMLGTSCTV-							505
cry1aC	: GFSNSSVSLTRAPMSWHRSAFWMILTPSSQQTIPLTKSTMLGTSCTV-	--VKGPFPTGDLIRFLRSPG-----							509
cry1a	: S	--S-GPFPTGDLIRFLRSGN-----							
cry1a	: 5	--HYRALVTSWTHRSADRINTEPNSLTIPVTPKAFLLOSSGAV-	--VRCGPFTGDLIRFLRTN-----						541
cry2aE	: AAN	--ENGIMTHLAPEDYFTGTSPIATQVNMNTRITSEKTF-	--Q-----CDSLRFEOSN-----						529
cry3aE	: QGS	--RETIPVLTWTHRSWDFEMMDSKKTOLPVYKAYLQSGAV-	--VAGRAFTEDLIIQCTE-----						551
cry3b	: QDR	--RETIPPFETWTHRSWDFENTDAEKITOLPVYKAYLQSGAV-	--TECPFTGENELFLKES-----						548
cry4a	: PATY	--KTQVYTAWTHS5VDTPKTLYTHLTOIPAKYANSLGTAEVY-	--VQGPFTGDLIDDFHFK-----						576
cry4a	: DYN	--5DRVSFAUTHKLIVDPM0Q1YD1ATQVPAKSNFLNATAVY-	--IKGPFTGDLIVALTSGT-----						519
cry4a	: P	--ENNFELYQWNSDUNNSDUNNSDUNNS-----	--LSG-----						475
cry6a	: STP	--DYDADATIPISWTHSAEYTRIYPTKTKTPAKVYKLLDPSTV	--VKGPFPTGDLIVKRG-----						531
cry7a	: SKNG	--SAYTGSFSPVYVUHTSADLNNTYEDKTOIPAKVENDMLYLGSV	--VQGPFTGDLIRFLRTN-----						560
cry8a	: cry10aE	--TFSVVRATSWTHSVDFTNTLDMITOHALKAALKYSSSDRIVK-----	--GPHTGFTGDLIVLKDSDM-----						546
cry10a	: TFGQ	--ERHGYSFATPSVDPMTAANKITQIPVVKASSING5151-----	--EKGFTGFTGDLVKGDRADS-----						547
cry16aE	: TFGQ	--ERHGYSFATPSVDPMTAANKITQIPVVKASSING5151-----	--GPHTGFTGDLVKGDRADS-----						539
cry19Ba	: DSEWICGHSS1SHAWTHASLDRMNTVTPDKIVQTPAVTAYLGRNSH-----	--VWAGCSTGDLVKGYSYHS-----							550
cry24aE	: ASNUTQFESALSLGHWHSSAGNRYVYVQKUTIPAKTAKTYPREHMPK-----	--GNGFTGDLADLSSHS-----							555
cry25aE	: cry9aE1	--ERGICTAUMMIESVDFDRVDPDKITUTIPAKVGDLYQYVK-----	--QGPHTGFTGDLVSMTRD-----						536
cry40aE1	: GNS	--RINYGUTHTSILKPRENTIEANQTIPAKSYLQNYLANTAIVY-TKEHTHTGDLIRFLRKSEYNAVY	--ACGPHTGDNWVSLP-----						548

FIG. 1H

* 660	* 680	* 700	* 720	
axm1006 : AGGGIRLINTMKTAGQSTTRIRYAAADRAAFFSTVLYPGGUGSDRFSVLEKSTVGGNY-----				
cry1aa : -Q1SLTRWMTIALPSQRVRIRYAASTINLQHFTS1D6--RP1NQGAF5A1M556-----				-DOLKYSDFKFKA1I1TPP : 634
cry1ac : MEGGYIEPVHF1F5TSTRVVRIRYAASTVPIHANNUG---5S1F5NTPTAT5L-----				-5NLQ5G5FR1VGF1TPP : 574
cry1ac : GTFCDIRWMMPPAQQRYRIRYAASTD1QFETT1NG--KA1DQGNSFATM9R-----				-DNLQ5SFGYFESANAF : 579
CRY1AS : -----T1ARYT1LHNGESTYL1YR5S1G1STRTVINGHVVY1T1A1D5W-----				-EDLDYK1FRTVGF1TPP : 611
CRY1AS : GSAATI1YTPDVSYSOKYR1HAYASTQ1FT1SLDG--A1P1QYD1D1T1K1NG-----				-DNLARF5U1N1G1V1A1D : 599
CRY3Aa1 : STARFKYT1LNGS1LLQYRVRIRYAASTINLRL1YQNSN--ND1F1VY1M1K1ND-----				-DT1LT1Y5F1L1A1F1S1TPP : 621
CRY3Bb : -----CQSN1FQQSY1F1R1YAS1G--SANTRAVI--NL51P1GVAELGMALNP1S1G-----				-DDLT1Y1F1D1A1T1N1S1M : 618
CRY4Aa : RME1QCKT1SF1D1P1T1S1G1L1R1YAA1S1P1V1A1S1Y1V1-----				-D1T1L1K1Y1K1F1Q1Y1E1S1M1Y1V1 : 644
CRY4Bb : -----				-D1T1K1Y1K1F1Q1Y1E1S1M1Y1V1 : 597
CRY5Aa : -----				-
CRY7Aa : GY1ED1KATW1S1PLS03YR1V1R1YATW1S1G1QENV1IND--K1L1Q1T1K1F1Q1N1T1E1Y1S1T1I : 604				
CRY6Aa : S1L1G1T1A1V1N1S1S1O1S1Y1R1Y1R1Y1A1S1T1D1F1E1T1Y1L1G-----				-ASLT1Y1T1F1K1F1A1S1F1D1T1 : 629
CRY10Aa : -----F1R1F1L1K1V1S1R1Y1R1Y1A1S1T1D1F1E1T1Y1L1G-----				-ATDL1Y1A1F1G1Y1T1P1R1V : 614
CRY1GAA : -----GL1T1F1A1L1D1K1F1R1V1R1Y1K1M1S1K1L1R1G1E1G1Y1Q1Q1E1M1S1P1F1G-----				-AF1S1Y1E1S1T1I1T1E1N1I1F1 : 615
CRY19Ba : -----F1S1R1K1-L1A1M1F1R1R1Y1A1S1G1Q1M1N1G1I1N1G-----				-TELKF1ED1F1Q1D1T1S1Y1 : 606
CRY24Aa : -----Y1S1F1K1Y1C1S1E1K1N1Y1R1R1Y1A1S1H1E1N1C1Q1M1R1P1S1T1G-----				-1SM1R1Y1A1F1K1Y1D1F1T1 : 620
CRY25Aa : QYDLRS1D1Y1D1R1L1D1T1D1Y1P1F1R1R1C1S1G1Y1T1S1Y1D1W1N1G-----				-LD1T1K1Y1S1F1Q1Y1S1P1G1N1Y1 : 629
CRY39Aa1 : -----LG1N1Y1T1P1Q1D1Y1R1R1Y1S1T1S1E1G1Y1L1Y1S1P1K1V1L1P1T1I1D1G1P1T-----				-FD1P1D1F1S1A1F1R1V1E1P1S1T1 : 604
CRY40Aa1 : SRLK1R1L1P-----				-D5F1G1Y1D1T1V1T1N1Q1P-----

		*	740	*	760	*	760
68xx1006	LPSSN	--I	QNDVEMQANSFQSDYNNVVDLKEFPLPSNTITLEYGERDLEKTKNAVNDLFTN	--	693	--	
CRY1Aa	NFENG	--S	SVFTLSARHVSNEVYDRIEFVPAEVTEAE--YDLERAQKAVNEFTS	--	629	--	
CRY1Ac	TSSLG	--N	-IVEGRNFSGTAGVILDRFEPVNTAEF--YNLERAQKAVNAFTS	--	631	--	
CRY1L	DFLHG	--Q	SFTTGANFSSCEVYDRIEFVPEVTEAE--YDFERAEQKVTALFTS	--	666	--	
CRY2a	MIVNT	--L	DINTVNTGSPDFLMMTFFPVNPLPV--	--	633	--	
CRY3Aa	ELSG	--M	MLQJIGTGLSAGDKVYDKEFIPVN--	--	652	--	
CRY3AaL	GF5GD	--K	MELLIQAFESFSWNEKUYDKEFIPVQV--	--	652	--	
CRY4a	KFAPN	--Q	QHSLVFLVFRSDVYNTMVLIDRIEFIPITRSIREDRERQKLETYQQLINTYAN	--	703	--	
CRY4Ba	VPERLSSNQLITIAQPLNETMENQVLDRIELIPTQSVLDETNQLESERVNNALFTN	--		--	659	--	
CRY4Ba	QFDE	--H	KITLHSDLSMNSSFYDSTIEFIPDVNTAERF--EKLEKQAKAVNTLFT	--	659	--	
CRY7Aa	QFRET	--Q	KILLNGDFESSGEVYDRIEFIPDVEETAE--QDLERAQKAVNAFTN	--	684	--	
CRY7Ba	PNKTEG	--E	PLTNTLTYGTPHNSWNYIDRIEFIPITQSVLDTYERQKNIKETKUVDLFTN	--	675	--	
CRY10a	DLTME	--V	TPYGRQFVEDIPSLLDIEFLTN--	--	648	--	
CRY16a	SGGPs	--I	SENTLNDNFNSGPIVLDKEFIPLGITLNAQGQDFTDUNANGMTHONYS	--	663	--	
CRY19Ba	PEENN	--F	FTDIDIESEGGLDKEFIPVPSGAFYEGRONIEKTOKAVIDLFTN	--	674	--	
CRY24a	YEDSP	--R	BLLRQPG-RLYDRIELIPLPNFFLSE--QENKSVDSIFIN	--	675	--	
CRY25a	RASTAG	--Y	FTFTEAAGFPGVYDRIEFIPDNTITLEYGERDLEKTKNAVNDLFTN	--	659	--	
CRY39a	CRY40a	--G	ELIQQNDTPINDRIVEFIPVNSTALEYEGRUSLEKAQDVNDLFTV	--	661	--	

* * * * *

exm1008-orf2 : VSPMTTSSTRKAKLIEIDQALIECEDEUPDKEKALUDTEKAKLUSGRMLQI -- GFDSEMTDFTENDLILGCRSPYPLFKKFLQMEGAR : 97

cry19a-orf2 : VAFULTSGAKMULKLETDYIDURANATEMSSEYDSEKUMQHDFKAKLUSARMLQI -- D-FEDLFSGTTSDMDSQADATFKGFLQMEGAR : 99

crybun2orf2 : ---MTISITRKLKIEIDQALISTECKMSNESSKEMMDFKAKLUSGRMLQI -- D-FEDSYNGKTSNTLREESPVFKGFLQMEGAR : 96

crybun3orf2 : ---MTFDTTRKLKIEIDQALISTECKMSDEHDFKAKLUSGRMLQI -- D-FEDSYNGKTSNTLREESPVFKGFLQMEGAR : 97

cry4a : INTKAMPIRQASLLDIDQALISTECKMSDEHDFKAKLUSGRMLQI -- D-FEDSYNGKTSNTLREESPVFKGFLQMEGAR : 99

cry4a : VIALFTUDAKDANIGTYIDQALQANUVEIISPEKMLLDEYKAKLUSGRMLQI -- D-FEDSYNGKTSNTLREESPVFKGFLQMEGAR : 99

* * * * *

exm1008-orf2 : DYGTLFPTTICRKIDESEKLPYTRYRGRGVGSSDILKMLTRYGRKDIDAMNPDPDLYAMQHNPSPCGDTRYCRESS --- SQVSDQSYTPT -- TDGYADRM : 192

cry19a-orf2 : DYGTLFPTTIVKIDESEKLPYTRYRGRGVGSSDILKMLTRYGRKDIDAMNPDPDLYAMQHNPSPCGDTRYCRESS --- SQVSDQSYTPT -- TDGYADRM : 192

crybun2orf2 : DIDGTLFPTTIVKIDESEKLPYTRYRGRGVGSSDILKMLTRYGRKDIDAMNPDPDLYAMQHNPSPCGDTRYCRESS --- SQVSDQSYTPT -- TDGYADRM : 192

crybun3orf2 : DYGTLFPTTIVKIDESEKLPYTRYRGRGVGSSDILKMLTRYGRKDIDAMNPDPDLYAMQHNPSPCGDTRYCRESS --- SQVSDQSYTPT -- TDGYADRM : 192

cry4a : DIDGTLFPTTIVKIDESEKLPYTRYRGRGVGSSDILKMLTRYGRKDIDAMNPDPDLYAMQHNPSPCGDTRYCRESS --- STTDCEGS --- DRCETSAYPANIGTDM : 190

cry4a : DIDGTLFPTTIVKIDESEKLPYTRYRGRGVGSSDILKMLTRYGRKDIDAMNPDPDLYAMQHNPSPCGDTRYCRESS --- STTDCEGS --- DRCETSAYPANIGTDM : 190

* * * * *

exm1008-orf2 : YACPONIDRKVKCHDRHPFD FHDIDTGEVDINTVIGIDVLK15NPDPDVAVGNELIEVEGPLGEALAHYKREKEKKWQHMEKREUETQADPAPQAV : 292

cry19a-orf2 : COCPT -- GKEKVKCDEVSHQFKFHDTGEVDINTVIGIDVLK15NPDPDVAVGNELIEVEGPLGEALAHYKREKEKKWQHMEKREUETQADPAPQAV : 292

crybun2orf2 : YACQNSRDRKVKCHDRHPFD FHDIDTGEVDINTVIGIDVLK15NPDPDVAVGNELIEVEGPLGEALAHYKREKEKKWQHMEKREUETQADPAPQAV : 292

crybun3orf2 : YACSSSEDRKVKCHDRHPFD FHDIDTGEVDINTVIGIDVLK15NPDPDVAVGNELIEVEGPLGEALAHYKREKEKKWQHMEKREUETQADPAPQAV : 292

cry4a : YSCQYDTERKVKVCD SHQFSFTTDTGALDTMENIGWATFKLSPDVAISDNLIEVEGPIDGEALSRYKHEKQDQEARSEETQADVAPQAI : 290

cry4a : YSCQYDTERKVKVCD SHQFSFTTDTGALDTMENIGWATFKLSPDVAISDNLIEVEGPIDGEALSRYKHEKQDQEARSEETQADVAPQAI : 290

FIG. 2B